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XL. Some Observations upon Myrrh, made in Abyffinia, in the Year 1771, and sent to William Hunter, M. D. with Specimens, in February, 1775. By James Bruce, Esq.

Redde, June 1, 1775. **T**HE ancients, and particularly DIOSCORIDES, have spoken of myrrh in such a manner, as to leave us no alternative, but to suppose either that they have described a drug which they had never seen; or, that the drug seen and described by them is absolutely unknown to modern naturalists and physicians. The Arabs, however, who form the link of the chain between the Greek physicians and ours, in whose country the myrrh was produced, and whose language gave it its name, have left us undeniable evidence, that what we know by the name of myrrh, is in nothing different from the myrrh of the ancients, growing in the same countries from which it was brought formerly to Greece; that is, from the East coast of Arabia Felix, bordering on the Indian Ocean, and that low land in Abyffinia on the South-east of the Red-sea, included nearly between the 12th and 13th degree of North latitude, and limited on the West by a meridian passing through the island Maffowa; and on the East by another, passing through Cape Guardfoy, without the straits of Bab el Mandel. This country the Greeks knew by the name
of

of the Troglodytria; not to be confounded with another nation of Troglodytes, very different in all respects, living in the forests between Abyffinia and Nubia. The myrrh of the Troglodytes was always preferred to that of Arabia; and it has maintained this preference to our days. That part of Abyffinia being half over-run and fettled, half wafted and abandoned, by a barbarous nation from the Southward, very little correspondence or commerce has been fince carried on between the Arabians and that coast; unlefs by fome desperate adventures of Mahometan merchants, made under favourable and accidental circumstances, which have fometimes fucceeded, and very often likewise have miscarried. The most frequent way by which this Troglodyte myrrh is exported, is from Maffowa, a small Abyffinian island, on the coast of the Red-sea. But notwithstanding this, the quantity of Abyffinian myrrh is so very small, in comparison of that of Arabia sent to Grand Cairo, that we may safely attribute to this only the reason, why our myrrh is not so good in quality as the myrrh of the ancients, which was Abyffinian. Although those barbarians make use of the gum, leaves, and bark, of this tree, in diseases to which they are subject; yet, as very little is wanted for such purposes, and the tree is the common timber of the country, this does not hinder them from cutting it down every day, to burn for the common uses of life; and as they never plant, or replace the trees destroyed, it is probable, that in some years the true Troglodyte myrrh will not exist; and the erroneous de-

scriptions of the Greek physicians will lead posterity, as they have done us now, into various conjectures, all of them false, upon the question, what that myrrh of the ancients was?

Though the myrrh of the Troglodytes was superior to any Arabian, yet the Greeks perceived, that it was not all of equal goodness. PLINY and THEOPHRASTUS make this difference to arise from the trees being partly wild, partly cultivated. But this is an imaginary reason; all the trees were wild. But it was the age of the tree and its health, the manner of making the cut or wound in it, the time of gathering the myrrh, and the circumstances of the climate when it was gathered, that constantly determined, and does yet determine, the quality of the drug. In order to have myrrh of the first, or most perfect sort, the savages chuse a young, vigorous tree, whose bark is without moss, or any parasite-plant; and, above the first large branches, give the tree a deep wound with an axe. The myrrh which flows, the first year, through this wound, is myrrh of the first growth; and never in very great quantity. This operation is performed some time after the rains have ceased; that is, from April to June; and the myrrh is produced in July and August. The sap once accustomed to issue through this gash, continues so to do spontaneously, at the return of every season: but the tropical rains, which are very violent, and continue six months, wash so much dirt, and lodge so much water in the cut, that in the second year, the tree has begun to rot and turn foul in that part, and the myrrh is of a second

cond quality, and sells in Cairo about a third cheaper than the first. The myrrh also produced from gashes near the roots, and in the trunks of old trees, is of the second growth and quality, and sometimes worse. This, however, is the *good* myrrh of the Italian shops every where but in Venice. It is of a blackish red, foul colour, solid and heavy, losing little of its weight by being long kept; and it is not easily distinguished from that of Arabia Felix. The third and worst kind is gathered from old wounds or gashes, formerly made, in old trees; or myrrh that, passing unnoticed, has hung upon the tree ungathered a whole year; black and earth-like in colour, and heavy, with little smell and bitterness. This apparently is the *caucalis* of the ancients.

PLINY speaks of *stacte*, as if it was fresh or liquid myrrh; and DIOSCORIDES, in his chapter upon it (cap. 67.), says something like this also. However, it is not credible, that the ancients, either Greeks or Latins, placed at such a distance, could ever see the myrrh in that state. The natives of its country say, that it hardens on the tree instantly, on being exposed to air; and I, who was several months within four days journey of the place where it grew, and had the savages quite at my devotion to go and come from thence, could never see the newest myrrh softer than the state it now is in; though, I think, it dissolved more perfectly in water, than when it had been kept. DIOSCORIDES too mentions a kind of myrrh which, he says, was green, and of the consistence of paste. But as SERAPION and the Arabs say, that *stacte* was

was a preparation of myrrh dissolved in water, it is probable, that this unknown green kind of DIOSCORIDES was, like the *flaſte*, a composition of myrrh and some other ingredient, not a species of Abyſſinian myrrh, which he could never have ſeen, either ſoft or green.

It may be remarked, that when we buy freſh or new myrrh, it has always a very ſtrong, rancid, oily ſmell; and when thrown into water, *globules* of an oily matter ſwim upon the ſurface. This greaſineſs is not from the myrrh; it is owing to the ſavages uſing goats-ſkins anointed with butter (to make them ſupple) wherein to put their myrrh at gathering; and in theſe ſkins it remains, and is brought to market: ſo that, far from its being a fault, as ſome ignorant druggiſts at Rome and Venice believe, it is a mark that the myrrh is freſh gathered, which is the beſt quality that myrrh of the firſt ſort can have. Beſides, far from hurting the myrrh, this oily covering muſt rather at firſt have been of ſervice; as it certainly imprifons and confines the volatile parts of new myrrh, which eſcape in great quantities, to a very conſiderable diminution in the weight. The piece of myrrh which I ſend you, is what a fine tree, leſs than fifteen inches diameter in the trunk at the bottom, wounded in two places, produced at one of the wounds, in the year 1771. And it may be regarded as the only unexceptionable and authentic evidence, in Europe, of what the Troglodyte myrrh was; unleſs it be thoſe pieces ſtill remaining in my collection, and a piece, ſomewhat ſmaller than yours, which I gave to the king of France's

France's cabinet at Paris. This piece which I send you, had lost near six dragmes Troy of its weight, between the 27th of August, 1771, and the 29th of June, 1773. It has lost a very few grains since. It was kept, as were all the other pieces, with great care in cotton, separately in a box, to prevent its losing weight by friction.

O P O C A L P A S U M.

At the time when I was on the borders of the Tal-Tal, or Troglodyte country, I sought to procure myself branches and bark of the myrrh tree, enough preserved to be able to draw it; but the length and ruggedness of the way, the heat of the weather, and the carelessness and want of resources of naked savages, always disappointed me. In those goat-skin bags into which I had often ordered them to put small branches, I always found the leaves mostly in powder; some few that were entire, seemed to resemble much the *acacia vera*, but were wider towards the extremity, and more pointed immediately at the end. In what order the leaves grew, I never could determine. The bark was absolutely like that of the *acacia vera*; and among the leaves I often met with a small straight weak thorn, about two inches long. These were all the circumstances I could combine, relative to the myrrh tree, too vague and uncertain to risk a drawing upon, when there still remained so many *desiderata* concerning it; and as the king was obstinate not to let me go thither, after what had happened to the surgeon,

geon, mate, and boat's crew, of the Elgin Indiaman, I was obliged to abandon the drawing of the myrrh tree to some more fortunate traveller. At the same time that I was taking these pains about the myrrh, I had desired the savages to bring me all the gums they could find, with the branches and bark of the trees that produced them. They brought me, at different times, some very fine pieces of incense, and at another time, a very small quantity of a bright colourless gum, sweeter on burning than incense; but no branches of either tree, though I found this latter afterwards, in another part of Abyssinia. But at all times they brought me quantities of gum, of an even and close grain, and of a dark-brown colour, which was produced by a tree called *saffa*: and twice I received branches of this tree in tolerable order; and of these I made a drawing. Some weeks after, walking in a Mahometan village, I saw a large tree, with the whole upper part of the trunk and the large branches so covered with great bosses and knobs of gum, as to appear monstrous: and asking farther about the tree, I found that it had been brought, many years before, from the myrrh country by merchants, and planted there for the sake of its gum, with which these Mahometans stiffened the blue Surat cloths, which they got damaged from Mocha, to trade in with the Galla and Abyssinians. Neither the tree which they called *saffa*, nor the name, nor the gum, could allow me to doubt a moment that it was the same as what had been brought to me from the myrrh country; but I had the additional satisfaction to find the
tree

tree all covered over with beautiful crimson flowers, of a very extraordinary and strange construction. I began then a drawing anew, with all that satisfaction known only to those who have been conversant in such discoveries. I took pieces of the gum with me. It is very light GALEN complains, that in his time, the myrrh was often mixed with a drug which he calls *opocalpasum*, by a Greek name; but what this drug was, is totally unknown to us at this day. But, as the only view of the savage, in mixing another gum with his myrrh, must have been to increase the quantity, and as the great plenty, in which this gum is produced, and its colour make it very proper for this use; and above all, as there is no reason to think, there is another gum-bearing tree of equal qualities in the country where the myrrh grows, it seems to me next to a proof, that this must have been the *opocalpasum*. I must, however, confess, that GALEN says, the *opocalpasum* was so far from an innocent drug, that it was a mortal poison, and had produced very fatal effects. But as those Troglodytes, though now more ignorant than formerly, are still well acquainted with the properties of their herbs and trees, it is not possible, that the savage, desiring to increase his sales, would mix them with a poison that must needs diminish them. And we may therefore, without scruple, suppose, that GALEN was mistaken in the quality ascribed to this drug; and that he might have imagined, that people died of the *opocalpasum*, who perhaps really died of the physician. First, because we know of no gum or resin that is a

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mortal poison: secondly, because, from the construction of its parts, gum is very ill adapted for having the activity which violent poison has; and considering the small quantities in which myrrh is taken, and the *opocalpasum* could have been but in an inconsiderable proportion to the myrrh, to have killed, it must have been a very active poison. Thirdly, these accidents, from a known cause, must have brought myrrh into disuse, as certainly as the Spaniards mixing *arsenic* with the bark, would banish that drug when we saw people die of it. Now this never was the case: it maintained its character among the Greeks and the Arabs, and so down to our days; and a modern physician thinks it might make man immortal, if it could be rendered perfectly soluble in the human body. GALEN then was mistaken as to the poisonous quality of the *opocalpasum*. The Greek physicians knew little of the natural history of Arabia; less still of that of Abyssinia; and we who have followed them know nothing of either. This gum being put into water swells and turns white, and loses all its glue; it resembles gum *adragant* much in quality, and may be eaten safely. This specimen came from the Troglodyte country in the year 1771: a piece of myrrh from Arabia Felix, and a piece of gum of the *sassa* from Abyssinia were packed up in another separate box to be sent you for comparison, but forgotten by my servant. They will be sent hereafter. The *sassa*, the tree which produces the *opocalpasum*, does not grow in Arabia. Arabian myrrh is easily known from Abyssinian by the following method:

take

take a handful of the smallest pieces, found at the bottom of the basket where the myrrh was packed, and throw them into a plate, and just cover them with water a little warm; the myrrh will remain for some time without visible alteration, for it dissolves slowly; but the gum will swell to five times its original size, and appear so many white spots amidst the myrrh.

The pieces sent you are, N° 1. Virgin Troglodyte myrrh. N° 2. The worst sort of Troglodyte myrrh, called *cancabs*. N° 3. *Opocalpasum* from the myrrh-country.